Abstract

A nitride based 3-5 group compound semiconductor light emitting device comprising: a substrate; a buffer layer formed above the substrate; a first In-doped GaN layer formed above the buffer layer; an $In_xGa_{1-x}N/In_yGa_{1-y}N$ super lattice structure layer formed above the first In-doped GaN layer; a first electrode contact layer formed above the $In_xGa_{1-x}N/In_yGa_{1-y}N$ super lattice structure layer; an active layer formed above the first electrode contact layer and functioning to emit light; a second In-doped GaN layer; a GaN layer formed above the second In-doped GaN layer; and a second electrode contact layer formed above the GaN layer. The present invention can reduce crystal defects of the nitride based 3-5 group compound semiconductor light emitting device and improve the crystallinity of a GaN GaN based single crystal layer in order to improve the performance of the light emitting device and ensure the reliability thereof.